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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,808	03/30/2001	Bruce Buffam	081862.P211	6624
7590 06/29/2007				
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		EXAMINER		
		MOORE, IAN N		
		ART UNIT		
		PAPER NUMBER		
		2616		
		MAIL DATE		
		DELIVERY MODE		
		06/29/2007		
		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/823,808	<b>Applicant(s)</b> BUFFAM, BRUCE	
	<b>Examiner</b> Ian N. Moore	<b>Art Unit</b> 2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-7,9-12,14,15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-12,14,15, and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 4,5,9,10,12,14, and 15 are objected to because of the following informalities:

**Claim 4** recites, "the method of **claim 3**" in line 1. Since claim 3 was canceled, it is suggested for claim 4 to depend on claim 2.

**Claim 9** recites, "the apparatus of **claim 8**" in line 1. Since claim 8 was canceled, it is suggested for claim 9 to depend on claim 6.

**Claim 14** recites, "the computer readable medium of **claim 13**" in line 1. Since claim 13 was canceled, it is suggested for claim 14 to depend on claim 11.

**Claim 12** recites "the computer-readable medium" in line 1. For consistency and clarity with "a computer-readable storage device" recited in claim 11, line 1, it is suggested to change "the computer-readable medium" in line 1 as "**the computer-readable storage device**".

**Claims 14 and 15** are also objected for the same reason as set forth above in claim 12.

**Claims 5 and 10** are also objected since they are depended upon objected claims 4 and 9 as set forth above.

Appropriate corrections are required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2,4-7,9-12,14,15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson (US006760335B1) in view of Bradley (US006366580B1) and Hamami (US 6,182,193).

**Regarding Claims 1, 6, 11, and 17**, Andersson discloses a digital communication switch (see FIG. ATM Node/system 34) comprising:

a bus (see FIG. 4, bus/connection 1 between elements within; see col. 1, line 36-46);

a processor coupled to the bus (see FIG. 4, ATM node/system 34 contains processor/CPU/controller; see col. 1, line 36-46);

a storage device coupled to the bus, the storage device to store instructions to be executed by the processor (see FIG. 4, ATM node/system contains a memory to store instruction to be executed by processor/CPU/controller; see col. 1, line 36-46); and

a buffer to store voice data cells (see FIG. 4, AAL2 node/system stores voice data cells for switching; see col. 1, line 60), wherein the processor is configured to monitor the available bandwidth of a multiplexed connection (see FIG. 8, step 52,54; determining/monitoring resources; see col. 4, line 25-42; see col. 5, line 55-64; col. 6, line 32-53; see col. 10, line 13-40), receive a voice call (see FIG. 6, setup request; see FIG. 8, a new AAL2 connection), route the call according to the available bandwidth (see FIG. 8, step 54 with NO; see col. 4, line 35-42; col. 10, line 40-52; establishing a connection with available resources), and overflow the voice call onto a new/added multiplexed connection without sending the voice call onto the multiplexed connection when the available bandwidth of the multiplexed connection is insufficient to carry the voice call (see FIG. 8, step 54, 56; adding/set-up a new AAL2 connection associated with a **new** AAL2 mux pair when there is no resources for new

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connection, and the new connection is not sent or established over original AAL-2 mux since there is no enough resources on original AAL-2 mux; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62);

presenting the voice call to the a new/added multiplexed connection to ATM signaling layer (see FIG. 4,6, setting-up/presenting a new AAL2 connection associated with a **new** AAL2 mux pair to ATM SE (signaling Element) or ATM Adaptation Layer (AAL) signaling layer/element (AAL2 SE); see col. 5, line 1-67) if the multiplexing connection's bandwidth is insufficient to carry the voice call (see FIG. 8, step 54, 56; if there is no resources for new connection, and the new connection is not sent or established over original AAL-2 mux since there is no enough resources on original AAL-2 mux; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62);

wherein overflowing the voice call comprises:

adding a single multiplexed connection over the link per call (see FIG. 8, step 54, 56; adding/set-up a new AAL2 connection associated with a new AAL2 mux pair when there is no resources for new connection; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62);

transmitting the voice call over the multiplexed connection (see FIG. 6; transmitting a connection over AAL2 connection; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62); and

tearing down the single multiplexed connection once the voice call is completed (see FIG. 9; dropping/removing/tear down a connection once the AAL2 call is released/completed; see col. 5, line 55 to col. 6, line 2; see col. 8, line 12-59; see col. 10, line 62 to col. 11, line 35).

Andersson does not explicitly disclose a non-multiplexed connection.

However, having a non-multiplexed connection/channel in ATM AAL2 utilizing a single ATM Single Channel Adaptation (SCA) is well known in the art and ATM standards. In particular, Bradley teaches a non-multiplexed connection (see col. 1, line 53-60; utilizing ATM Single Channel Adaptation (SCA) SVC instead of multiplexing multiple channel onto a single SVC).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a non-multiplexed connection or a signal channel, as taught by Bradley in the system of Andersson, so that it would avoid the necessity of having to de-multiplex and multiplex the packet; see Bradley col. 1, line 57-59.

Although discloses signaling is performed according to well known ATM signaling protocols, neither Andersson nor Bradley explicitly disclose Q.2931.

However, setting-up a connection or signaling utilizing ATM Q.2931 (B-ISDN,DSS 2, UNI for basic call/connection control) layer/protocol is well known in the art as ITU-T Q.2931 (see IDS 1-18-2005 of the record). In particular, Hamami discloses sending the call by presenting a call to the ATM Q.2931 layer for signaling to set up a connection/call (see FIG. 1, user side 10 setup the call by transmitting to signaling module 16 with Q.2931 layer component for signaling request to the network side 30; see col. 5, line 14-46; see col. 6, line 1-44).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Q.2931, as taught by Hamami, in the combined system of Andersson and Bradley, so that it would provide services compatible with ITU-T recommendation for signaling in ATM network; see Hamami col. 5, line 24-30; also by utilizing

ITU-T ATM standard Q.2931, it would provide interoperability with other ATM system in the networks.

**Regarding Claims 2, 7, 12, and 18,** Andersson discloses sending the call over the multiplexed connection when the available bandwidth of the multiplexed connection is sufficient to carry the call (see FIG. 8, step 54 with NO; see col. 4, line 35-42; col. 10, line 40-52; establishing a connection with available resources by utilizing adequate existing/unused AAL2 connection).

**Regarding Claims 4, 9, 14 and 19,** Andersson discloses wherein the multiplexed connection is a multiplexed Q.AAL2 signaling channel (see col. 2, line 20-30; see col. 5, line 62-64; see col. 7, line 63; see col. 8, line 35-42; AAL2 mux connection/channel is Q.2630 channel which is also known as Q.AAL2 signaling channel in the art).

**Regarding Claims 5, 10, 15 and 20,** the combined system of Andersson, Bradley and Hamami disclosed all limitation. Andersson discloses wherein the newly added multiplexed connection is multiplexed Q.AAL2 signaling channel (see col. 2, line 20-30; see col. 5, line 62-64; see col. 7, line 63; see col. 8, line 35-42; AAL2 mux connection/channel is Q.2630 channel which is also known as Q.AAL2 signaling channel in the art). Bradley also discloses a non-multiplexed/a single channel in AAL2 (see col. 1, line 53-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Bradley's a non-multiplexed connection or a signal channel in Andersson's a newly added Q.AAL2 signaling channel, as taught by Bradley in the system of Andersson for the same motivation as stated above in claims 1,6,11 and 17.

***Response to Arguments***

4. Applicant's arguments filed 5-25-07 have been fully considered but they are not persuasive.

**Regarding claims 1,2,4-7,9-12,14,15,17-20, the applicant argued that, "...Andersson, Bradley or Hamami does not disclose or teach overflowing a call onto a non-multiplexed connection without sending the call on the multiplexed connection...Andersson, Bradley, or Hamami does not disclose or teach presenting an overflow call to an ATM Q.2931 layer...Andersson, Bradley, or Hamami also does not discloses or teach the limitations "overflowing the call includes adding a single non-multiplexed connection over the link per call; transmitting the call over the non-multiplexed connection; and tearing down the single non-multiplexed connection once the call is completed"..."** in page 9-14.

**In response to applicant's argument, the examiner respectfully disagrees** with the argument above since the combined system of Andersson, Bradley and Hamami clearly teaches the claimed invention.

Andersson discloses overflow the voice call onto a new/added multiplexed connection without sending the voice call onto the multiplexed connection when the available bandwidth of the multiplexed connection is insufficient to carry the voice call (see FIG. 8, step 54, 56; adding/set-up a new AAL2 connection associated with a **new** AAL2 mux pair when there is no resources for new connection, and the new connection is not sent or established over original AAL-2 mux since there is no enough resources on original AAL-2 mux; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62); presenting the voice call to the a new/added multiplexed connection to ATM signaling layer (see FIG. 4,6, setting-up/presenting a



new AAL2 connection associated with a **new** AAL2 mux pair to ATM SE (signaling Element) or ATM Adaptation Layer (AAL) signaling layer/element (AAL2 SE); see col. 5, line 1-67) if the multiplexing connection's bandwidth is insufficient to carry the voice call (see FIG. 8, step 54, 56; if there is no resources for new connection, and the new connection is not sent or established over original AAL-2 mux since there is no enough resources on original AAL-2 mux; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62); wherein overflowing the voice call comprises: adding a single multiplexed connection over the link per call (see FIG. 8, step 54, 56; adding/set-up a new AAL2 connection associated with a new AAL2 mux pair when there is no resources for new connection; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62); transmitting the voice call over the multiplexed connection (see FIG. 6; transmitting a connection over AAL2 connection; see col. 4, line 25-36,40-47; col. 5, line 55 to col. 6, line 2; see col. 10, line 52-62); and tearing down the single multiplexed connection once the voice call is completed (see FIG. 9; dropping/removing/tear down a connection once the AAL2 call is released/completed; see col. 5, line 55 to col. 6, line 2; see col. 8, line 12-59; see col. 10, line 62 to col. 11, line 35).

It is so well known in the art and ATM standards that a non-multiplexed connection/channel in ATM AAL2 utilizing a single ATM Single Channel Adaptation (SCA). In particular, Bradley teaches a non-multiplexed connection (see col. 1, line 53-60; utilizing ATM Single Channel Adaptation (SCA) SVC instead of multiplexing multiple channel onto a single SVC).

It is also well known in the art and ITU-T standards (i.e. ITU-T Q.2931, see IDS 1-18-2005 of the record) that setting-up a connection or signaling utilizing ATM Q.2931 (B-

ISDN,DSS 2, UNI for basic call/connection control) layer/protocol. In particular, Hamami discloses sending the call by presenting a call to the ATM Q.2931 layer for signaling to set up a connection/call (see FIG. 1, user side 10 setup the call by transmitting to signaling module 16 with Q.2931 layer component for signaling request to the network side 30; see col. 5, line 14-46; see col. 6, line 1-44).

Thus, it is clear that the combined system of Andersson, Bradley and Hamami as a whole disclose the applicant claimed invention.

**Regarding claims 1,2,4-7,9-12,14,15,17-20, the applicant argued that, “...Andersson does not suggest a combination with Bradley, and Bradley does not suggest a combination with Andersson because Bradley teaches away from the Q.2630.1 ...it would be impermissible hindsight to combine Andersson with Bradley...”** in page 14.

**In response to applicant's argument that there is no suggestion to combine the** references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a non-multiplexed connection or a signal channel, as taught by Bradley in the system of Andersson, so that it would avoid the necessity of having to de-multiplex and multiplex the packet; see Bradley col. 1, line 57-59.

**In response to applicant's argument that Bradley explicitly teaches away,** Bradley col. 1, lines 56-58 discloses that a signal channel SVC enables the requirement of multiplex/de-multiplex, which clearly anticipates applicant claimed invention of “**non-multiplex connection**” since Bradley’s single channel connection neither multiplexed nor de-multiplexed. Thus, Bradley does not teach away from Andersson.

**In response to applicant's argument that Bradley teaches away,** the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, applicant argued claimed recites, “...*monitor the available bandwidth of a multiplexed connection...overflow the call onto a non-multiplex connection*”. Andersson discloses, “*monitor the available bandwidth of a multiplexed connection...*” by utilizing a multiplex connection for an overflow new connection. Bradley discloses “*the call onto a non-multiplex connection*” by utilizing non-multiplex connection or a signal channel for a connection/data in order to avoid muxing and demuxing. Thus, Andersson’s overflow new multiplex connection can be modified with “teaching” of Bradley, **not bodily incorporation**, which utilizes a non-multiplex or a single connection. Moreover, both Andersson and Bradley deal with ATM network. In view of the above, due to the fact that Bradley teaches what Andersson’s lacks does not make or cause Bradley to teach away.

**In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning,** it must be recognized that any judgment on

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obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

**Regarding claims 1,2,4-7,9-12,14,15,17-20, the applicant argued that, “...Andersson does not suggest a combination with Hamami, and Hamami does not suggest a combination with Andersson because Hamami teaches away ...it would be impermissible hindsight to combine Andersson with Hamami...”** in page 14.

**In response to applicant's argument that there is no suggestion to combine the** references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Q.2931, as taught by Hamami, in the combined system of Andersson and Bradley, so that it would provide services compatible with ITU-T recommendation for signaling in ATM network; see Hamami col. 5, line 24-30; also by utilizing ITU-T ATM standard Q.2931, it would provide interoperability with other ATM system in the networks.

**In response to applicant's argument that Hamami teaches away**, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Andersson, Bradley and Hamami deal with ATM network. Note that the rejection is based on Andersson, not Q.2630.1 standard reference. Thus, the argument of Hamami teaching away with respect to Q.2630.1 is irrelevant. In fact, both Q.2630.1 and Q.2931 are both utilize Broadband ISDN singing protocols in ATM network. Moreover, Hamami's ITU Q.2931 is well known standard, and clearly one skilled in the ordinary art would clearly utilize the teaching of the standard to implement in the combined system of Andersson and Bradley. Thus, due to the fact that using the teaching of Hamami's ITU Q.2931 standard in the combined system of Andersson and Bradley, simply does not mean that Hamami teaches away.

**In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning**, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*gmm*  
Ian N. Moore  
Art Unit 2616

6-19-07

  
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